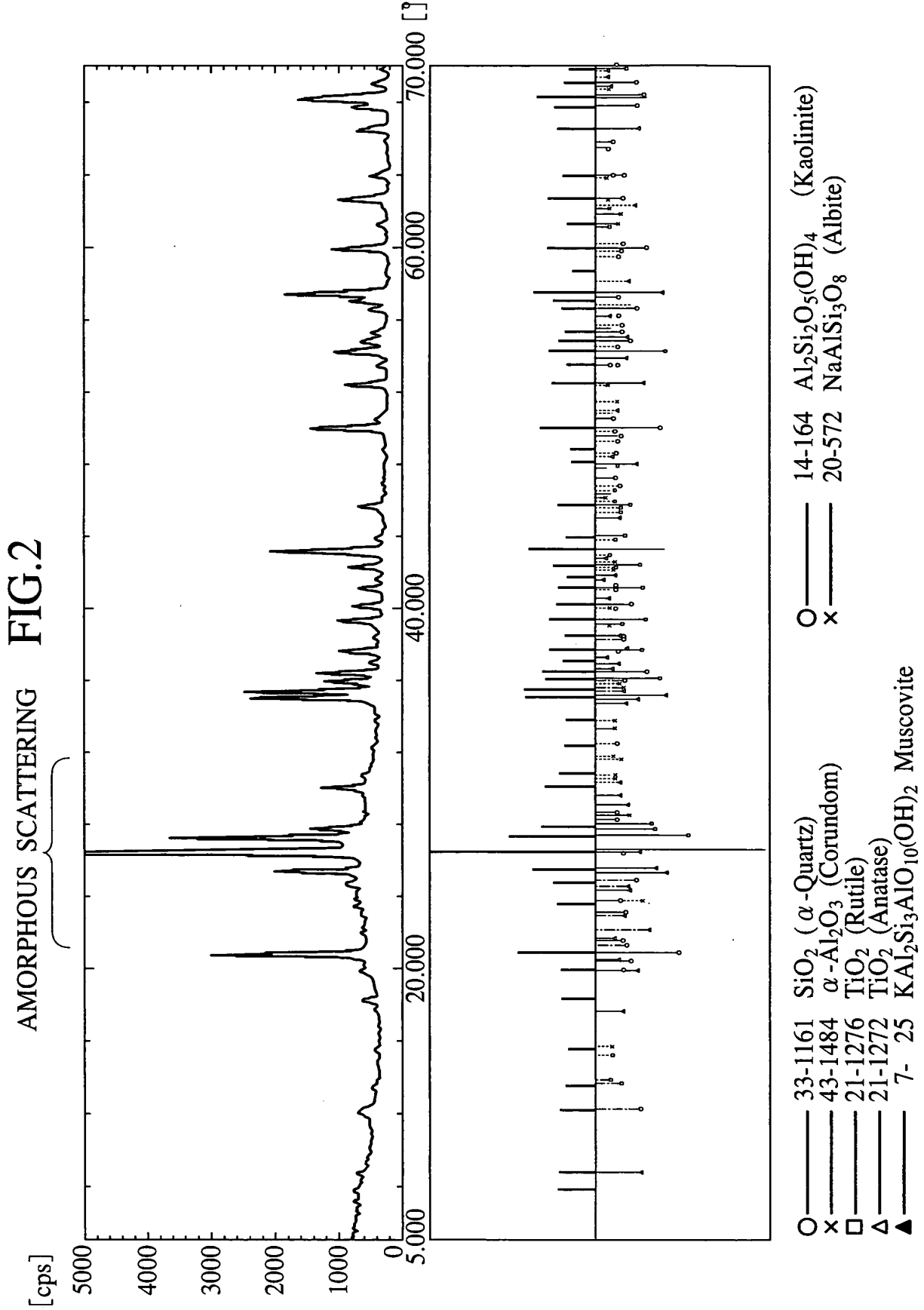


1/24

FIG.1

MAJOR COMPONENTS	MINER COMPONENTS
α -QUARTZ(SiO_2)	ANATASE(TiO_2)
CORUNDUM(α - Al_2O_3)	MUSCOVITE($\text{KAl}_2\text{Si}_3\text{AlO}_{10}(\text{OH})_2$)
RUTILE(TiO_2)	Ca_3SiO_5
AMORPHOUS SUBSTANCES	KAOLINITE($\text{Al}_2\text{Si}_2\text{O}_{13}(\text{OH})_4$)
	ALBITE($\text{NaAlSi}_3\text{O}_8$)

2/24



3/24

FIG.3

【THE UNIT OF ELEMENT CONTENT : IN INCINERATED
STATE AFTER DRYING AT 105℃ %(mm/mm)】

ELEMENTS	METAL COATING MATERIAL	HEAT-RESISTANT COATING MATERIAL
Na	0.9	-
Mg	0.03	-
Al	6	2.7
Si	18	11
P	0.2	Tr
S	-	0.05
Cl	0.08	0.01
K	3	0.12
Ca	5	0.01
Ti	7	0.38
Cr	-	2.0
Mn	-	2.9
Fe	0.2	7.3
Co	-	0.02
Ni	-	-
Zn	2	Tr
Rb	-	-
Sr	0.01	Tr
Zr	0.01	4.0
Nb	0.02	-
Mo	1.2	-
Cu	-	1.3
As	-	Tr

Tr=0.001~0.01

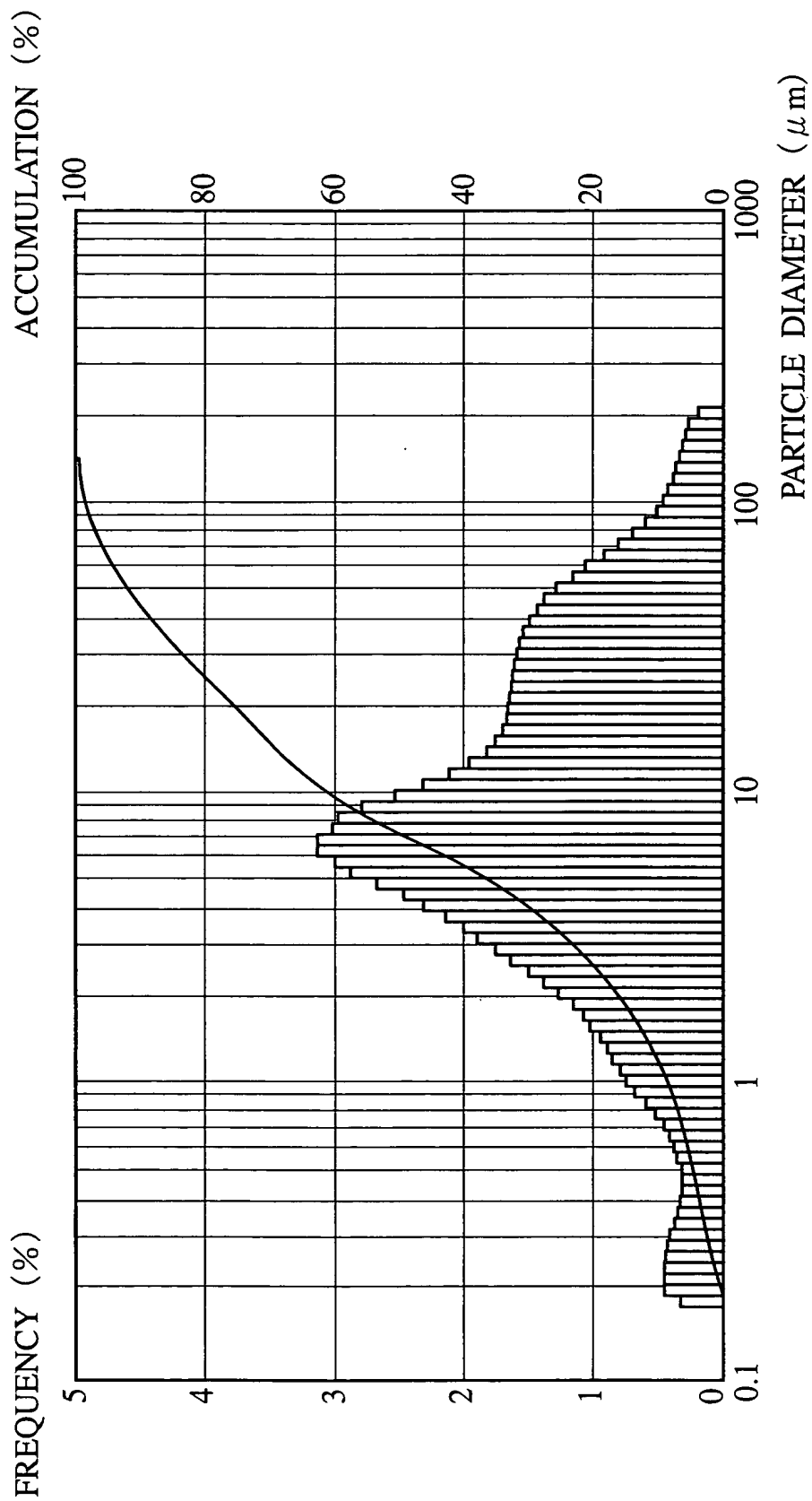
4/24

FIG.4

ELEMENT	ANALYSIS VALUE (MASS %)		
	1st	2nd	AVERAGE
Na	0.88	0.86	0.87
Mg	0.023	0.023	0.023
Al	6.82	6.72	6.77
Si	7.65	7.56	7.60
P	0.0047	0.0048	0.0048
S	0.009	0.009	0.009
Cl	0.034	0.037	0.036
K	1.25	1.21	1.23
Ca	0.027	0.022	0.0240
Ti	1.81	1.78	1.79
Cr	0.18	0.18	0.18
Mn	0.11	0.11	0.11
Fe	0.25	0.24	0.24
Co	0.081	0.080	0.081
Ni	0.086	0.084	0.085
Sr	0.0012	0.0011	0.0012
Zr	0.0010	0.0011	0.0011
Nb	<0.0005	<0.0005	<0.0005

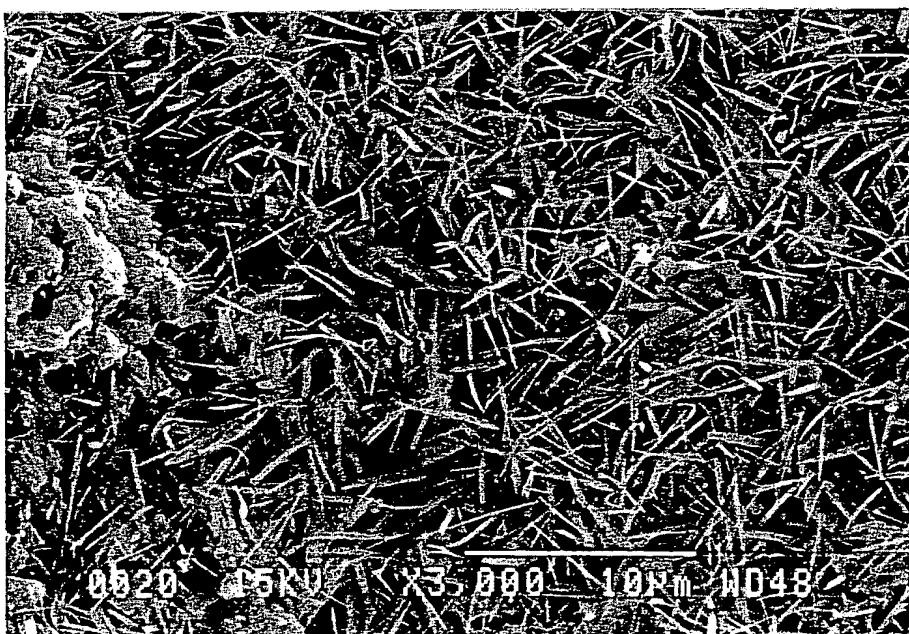
5/24

FIG.5



6/24

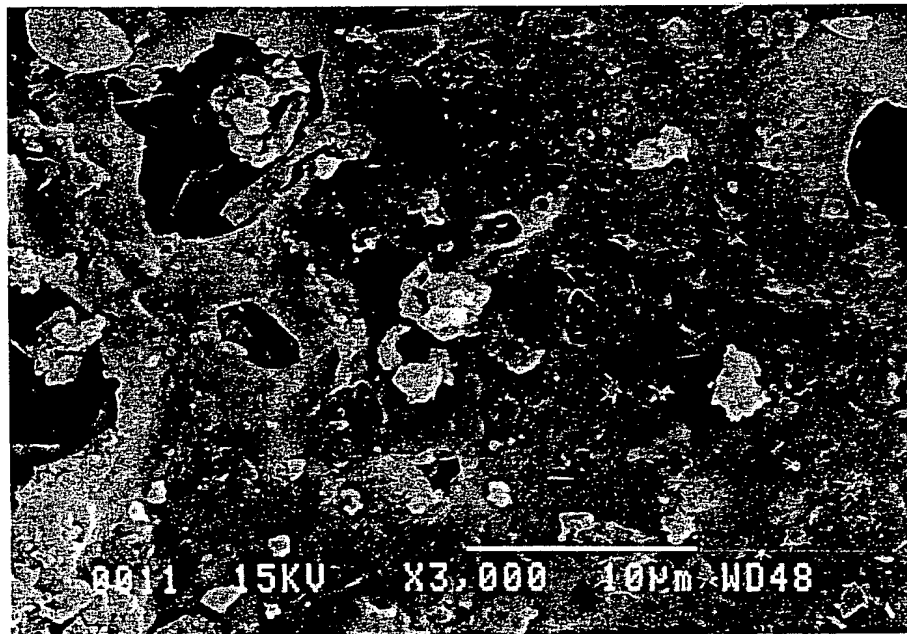
FIG.6



BEST AVAILABLE COPY

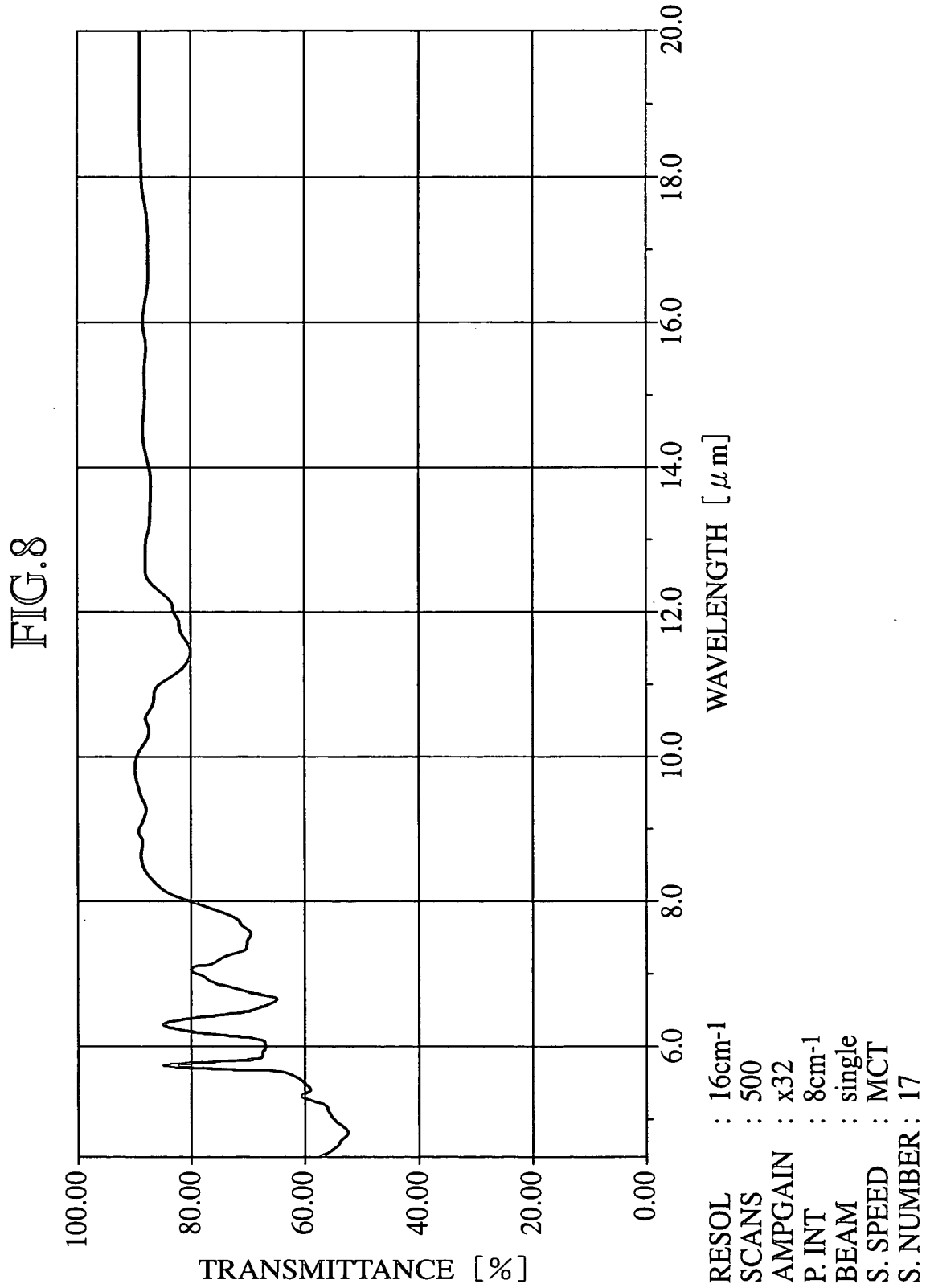
7/24

FIG. 7



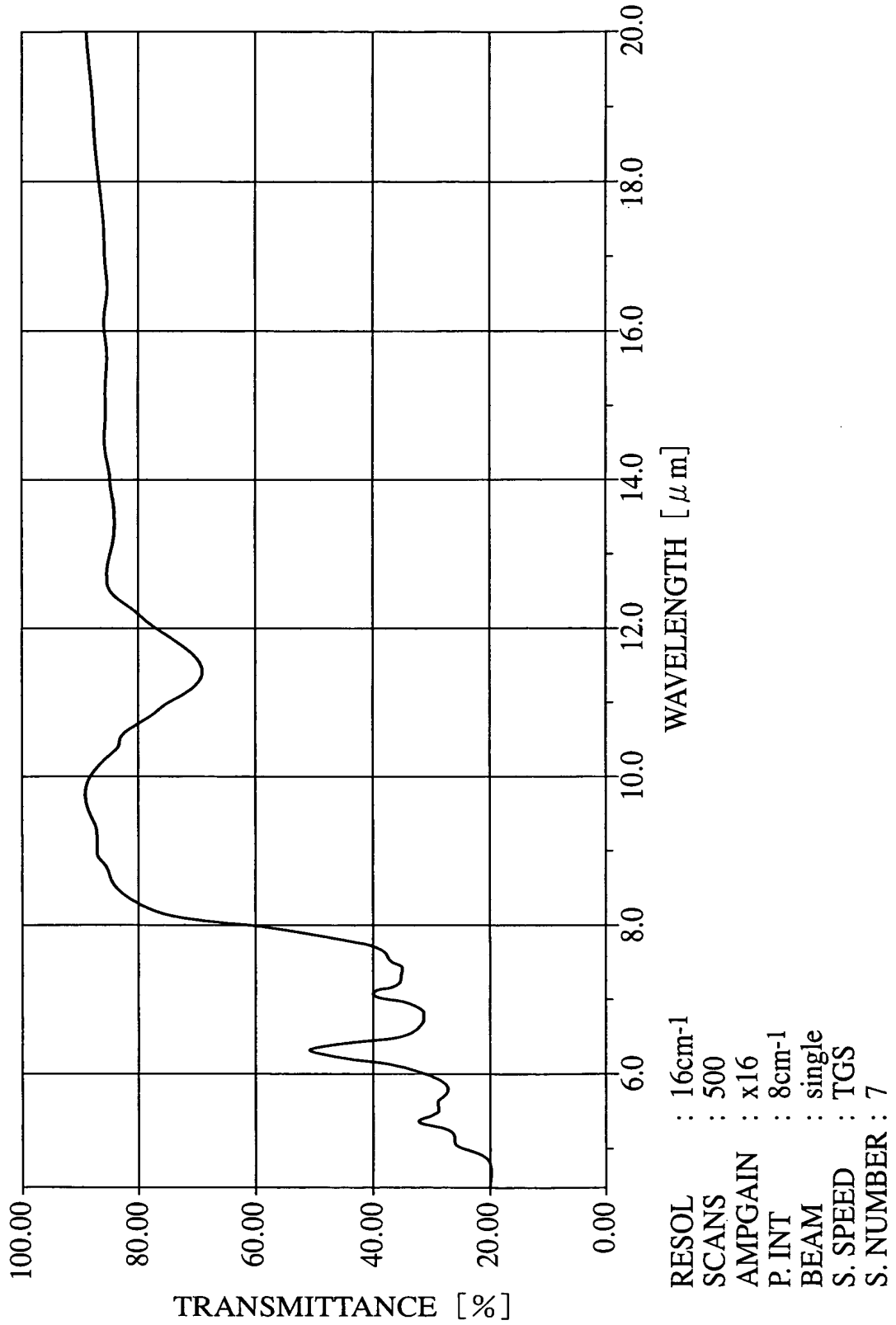
BEST AVAILABLE COPY

8/24



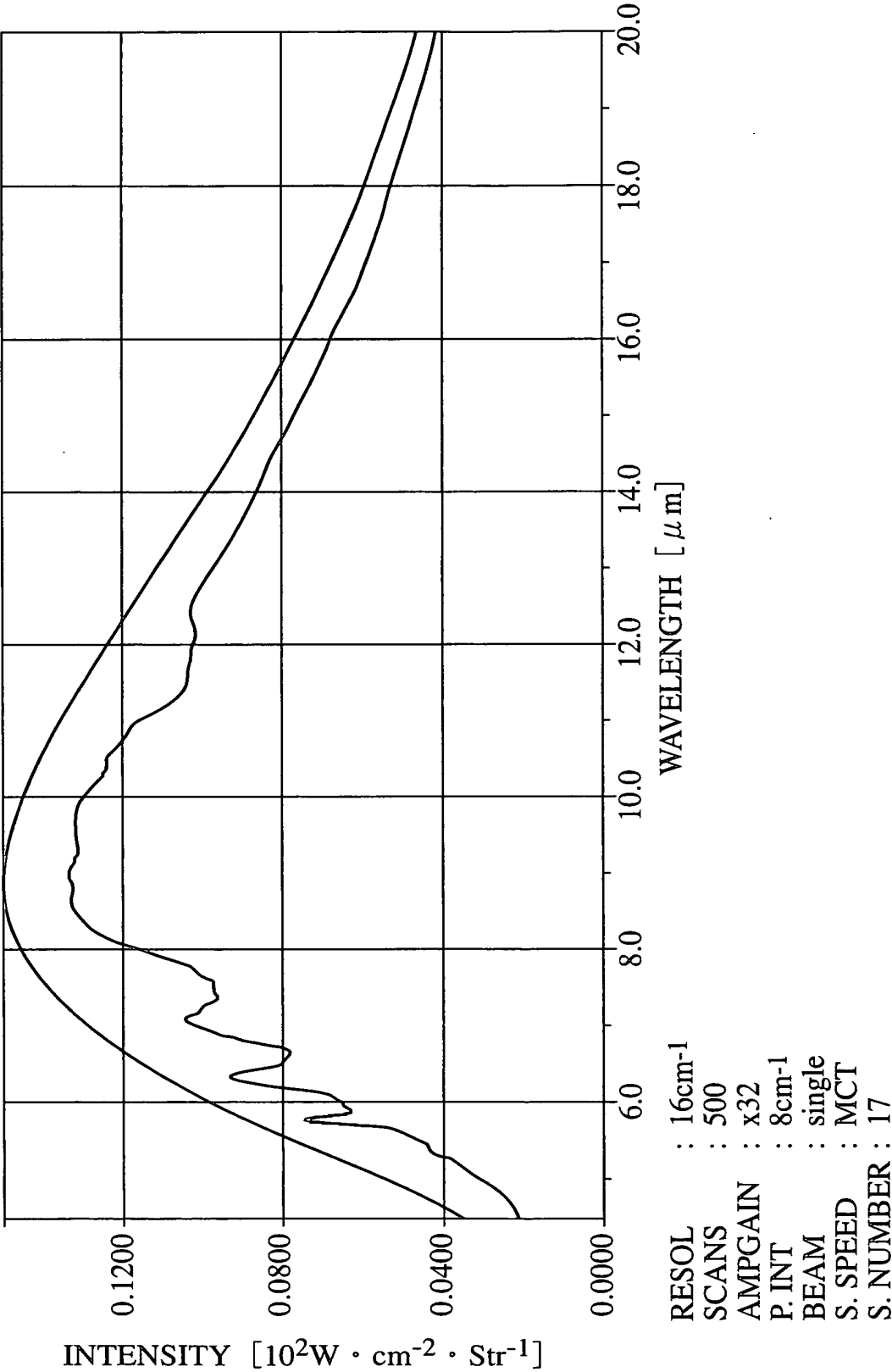
9/24

FIG.9



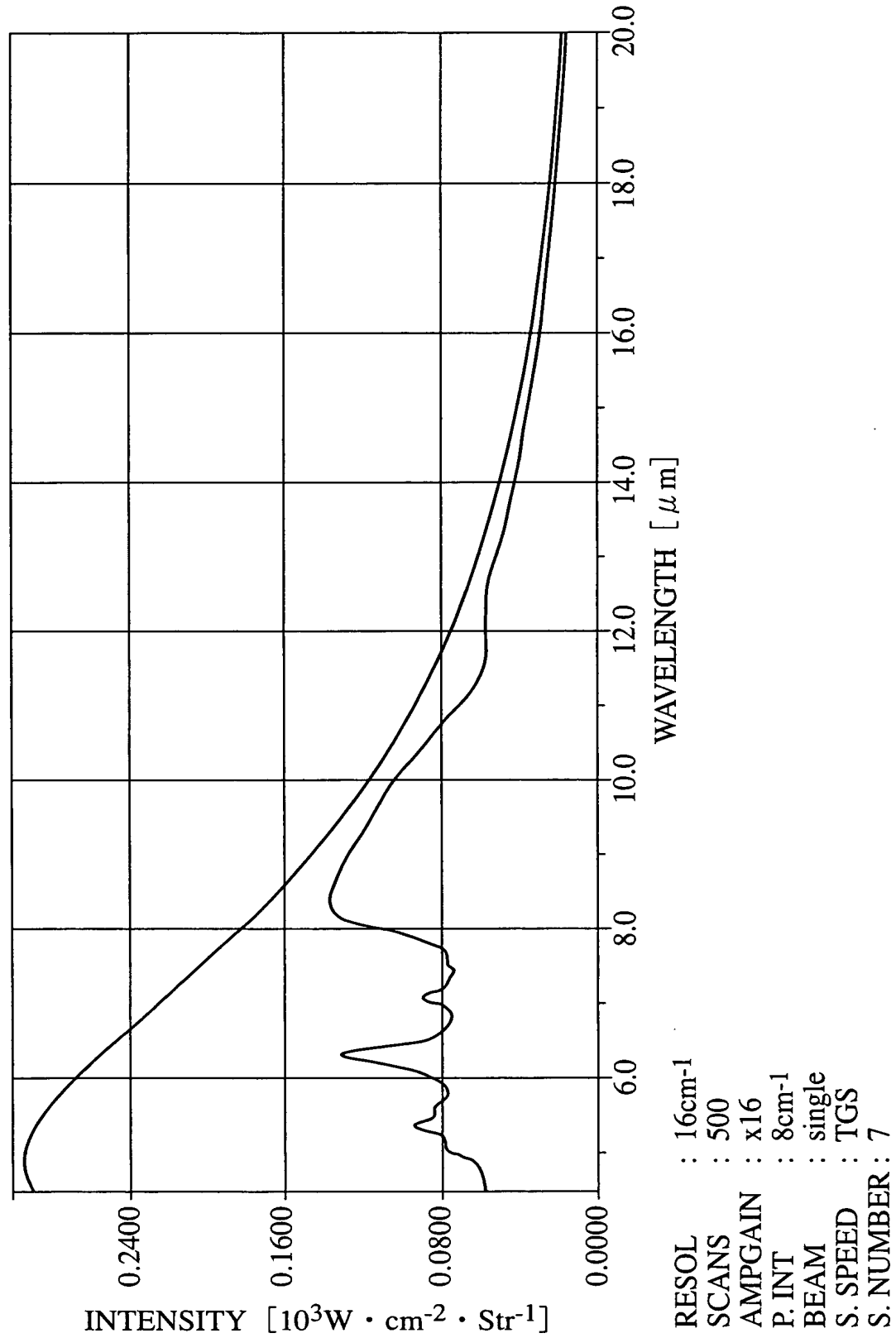
10/24

FIG.10

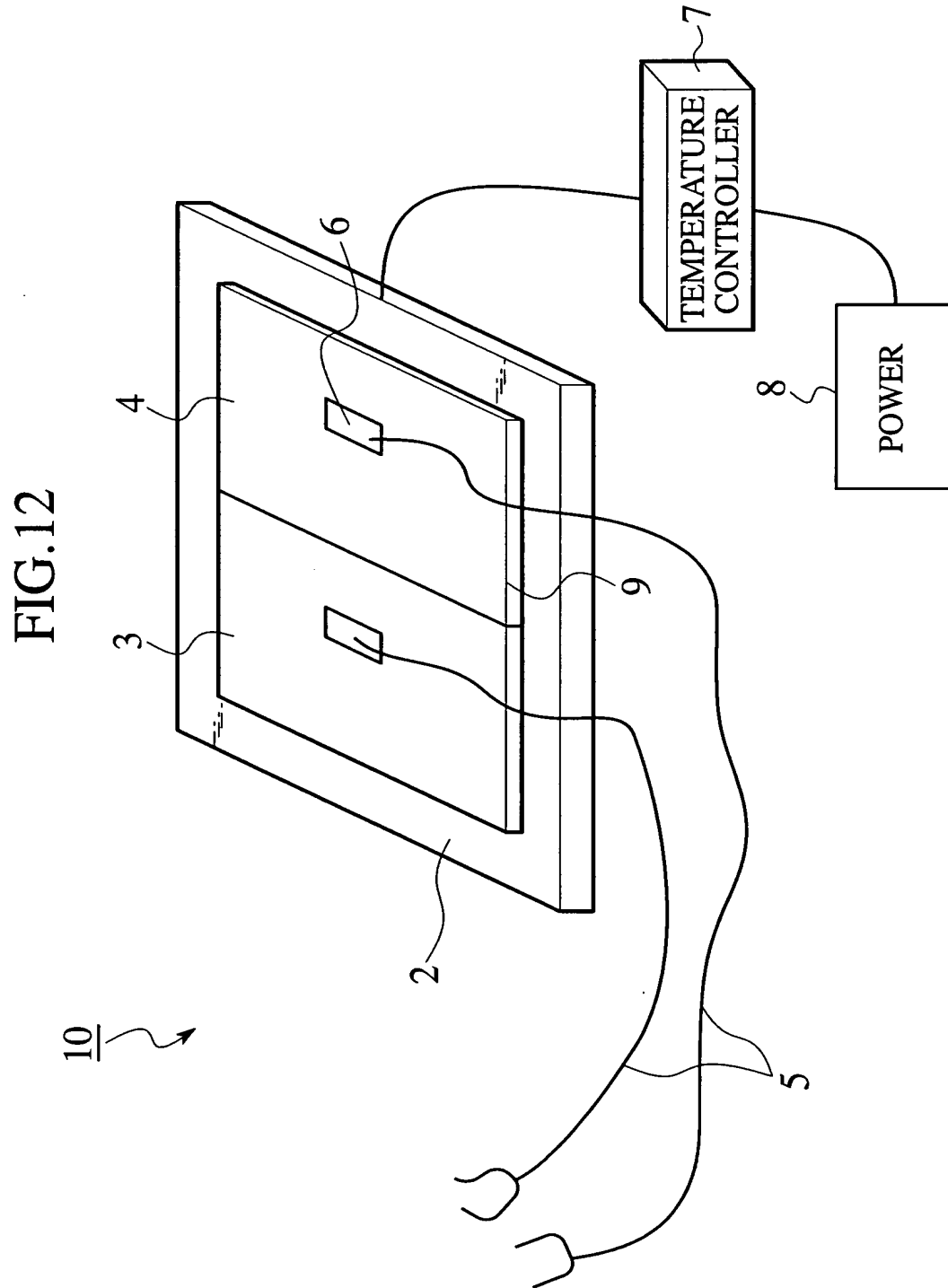


11/24

FIG.11

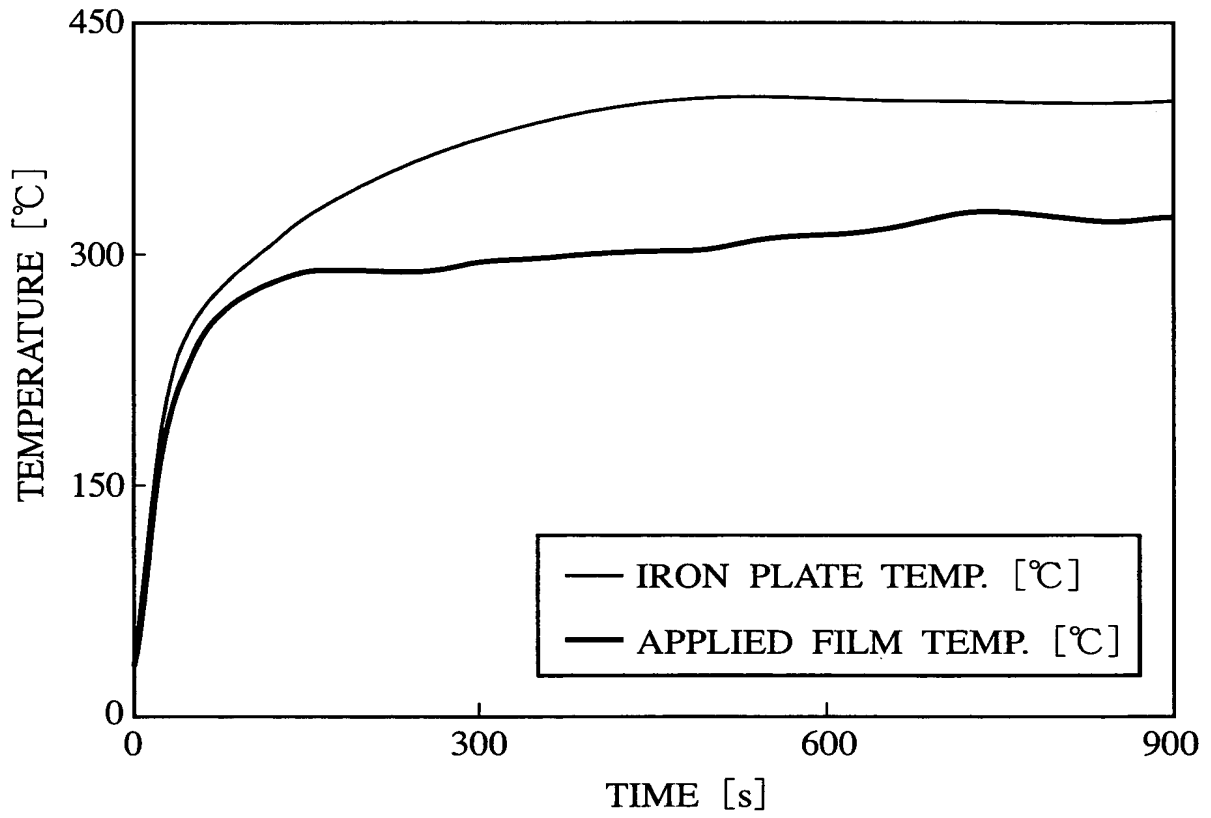


12/24



13/24

FIG.13



14/24

FIG.14

BINDER	SODIUM SILICATE (LIQUID)	
	POTASSIUM SILICATE (LIQUID)	
	SILICON DIOXIDE (SILICA)	
	AMORPHOUS SILICA	
	BENTONITE	
	WATER	
	PLASTIC LAW MATERIAL	
ADHESIVE	MIXING TANK 1	WATER
		CAUSTIC SODA
	MIXING TANK 2	WATER
		HIGH-PROTEIN POWDER
	FIRST POLYVINYL ACETATE	
	GLYCERIN	
THICKENING AGENT	BINDER	
	ADHESIVE	
	FIRST POLYVINYL ACETATE	
	SECOND POLYVINYL ACETATE	
NONMETAL COATING MATERIAL	THICKENING AGENT	
	TITANIUM OXIDE	
	KAOLIN	
	PLASTIC LAW MATERIAL	
METAL COATING MATERIAL	NONMETAL COATING MATERIAL	
	ADHESIVE	
	ALUMINUM OXIDE POWDER	
	CERAMIC POWDER	

15/24

FIG.15

WATER	14.5g
PROTEIN	11.7g
LIPID	1.8g
QLUCIDE	71.4g
FIBER	0.2g
ASH	0.4g
CALCIUM	20mg
PHOSPHORUS	75mg
IRON	1.0mg
SODIUM	2mg
POTASSIUM	80mg
VITAMIN B1	0.1mg
VITAMIN B2	0.05mg
NIACIN	0.9mg
VITAMIN E EFFECTIVE	0.4mg

16/24

FIG.16

【THE UNIT OF ELEMENT CONTENT : IN INCINERATED
STATE AFTER DRYING AT 105°C %(mm/mm)】

ELEMENT	NON-METAL COATING MATERIAL	HEAT-RESISTANT COATING MATERIAL
Na	1.0	-
Mg	0.03	-
Al	11	2.7
Si	20	11
P	0.02	Tr
S	0.07	0.05
Cl	0.1	0.01
K	4	0.12
Ca	0.05	0.01
Ti	5	0.38
Cr	0.5	2.0
Mn	0.4	2.9
Fe	0.6	7.3
Co	0.2	0.02
Ni	0.2	-
Zn	-	Tr
Rb	Tr	-
Sr	0.01	Tr
Zr	0.01	4.0
Nb	0.03	-
Mo	-	-
Cu	-	1.3
As	-	Tr

Tr=0.001~0.01

17/24

FIG.17

ELEMENT	ANALYSIS VALUE (MASS %)		
	1st	2nd	AVERAGE
Na	1.49	1.46	1.48
Mg	0.030	0.030	0.030
Al	2.28	2.23	2.25
Si	12.5	12.8	12.6
P	0.0087	0.0090	0.0088
S	0.012	0.012	0.012
Cl	0.021	0.024	0.023
K	2.23	2.23	2.23
Ca	0.025	0.025	0.025
Ti	4.31	4.27	4.29
Cr	0.0009	0.0009	0.0009
Mn	0.0021	0.0021	0.0021
Fe	0.13	0.13	0.13
Co	<0.0003	<0.0003	<0.0003
Ni	<0.0003	<0.0003	<0.0003
Sr	0.0047	0.0046	0.0047
Zr	0.0048	0.0047	0.0047
Nb	0.0003	0.0003	0.0003

18/24

FIG.18

【THE UNIT OF ELEMENT CONTENT : IN INCINERATED
 STATE AFTER DRYING AT 105°C %(mm/mm)】

ELEMENT	BINDER
Na	2
Mg	0.1
Al	2
Si	27
P	0.01
S	0.1
Cl	0.13
K	12
Ca	0.13
Ti	0.11
Cr	-
Mn	0.04
Fe	0.7
Co	-
Ni	-
Zn	Tr
Rb	Tr
Sr	Tr
Zr	Tr
Nb	-
Mo	-
Cu	-
As	-

Tr=0.001~0.01

19/24

FIG.19

ELEMENT	ANALYSIS VALUE (MASS %)		
	1st	2nd	AVERAGE
Na	2.89	2.90	2.90
Mg	0.016	0.017	0.017
Al	0.19	0.19	0.19
Si	10.9	10.9	10.9
P	0.0008	0.0008	0.0008
S	0.002	0.002	0.002
Cl	<0.001	<0.001	<0.001
K	4.53	4.53	4.53
Ca	0.011	0.011	0.011
Ti	0.0097	0.0094	0.0096
Cr	0.0001	0.0001	0.0001
Mn	0.0013	0.0013	0.0013
Fe	0.041	0.041	0.041
Co	<0.0001	<0.0001	<0.0001
Ni	<0.0001	<0.0001	<0.0001
Sr	0.0002	0.0002	0.0002
Zr	0.0010	0.0010	0.0010
Nb	<0.0001	<0.0001	<0.0001

20/24

FIG.20

	IGNITION TIME	MAXIMUM HEAT RELEASE RATE [kW/m ²]	TOTAL CALORIFIC VALUES [MJ/m ²]
HEAT-RADIATIVE WASTE PAPER BOARD	NOT IGNITE	9.36	1.89 (5min) 4.12 (10min) 7.51 (20min)
HEAT-RADIATIVE CHARCOAL BOARD	NOT IGNITE	13.07	2.66 (5min) 4.56 (10min) 7.65 (20min)

21/24

FIG.21

MAJOR COMPONENTS	MINER COMPONENTS
α -QUARTZ(SiO_2)	Ca_3SiO_5
CORUNDUM(α - Al_2O_3)	MULLITE($\text{Al}_6\text{Si}_2\text{O}_{13}$)
AMORPHOUS SUBSTANCES	KAOLINITE($\text{Al}_2\text{Si}_2\text{O}_{13}(\text{OH})_4$)
	TALC($\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$)
	$\text{Na}_2\text{O} \cdot 11\text{Al}_2\text{O}_3$
	CORDIERITE($\text{Mg}_2\text{Al}_4\text{Si}_6\text{O}_{18}$)

22/24

FIG.22

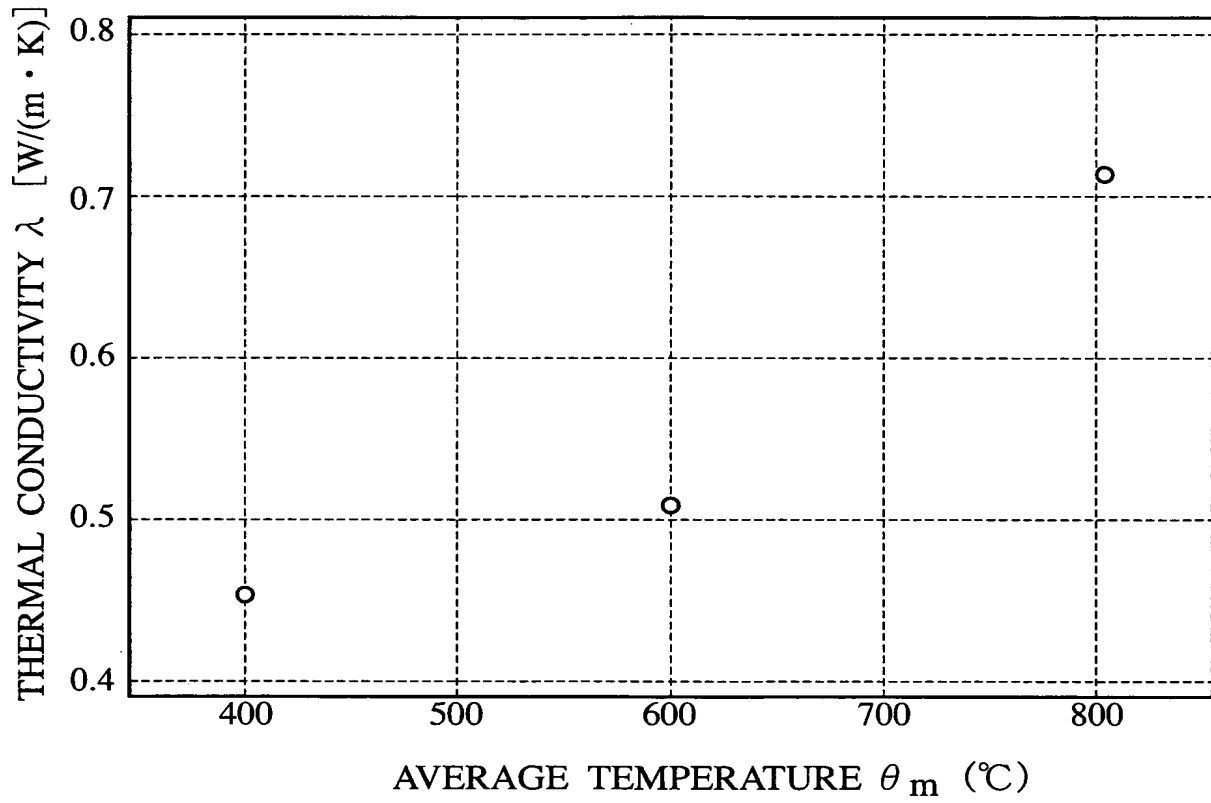
【THE UNIT OF ELEMENT CONTENT : IN INCINERATED
STATE AFTER DRYING AT 105°C %(mm/mm)】

ELEMENTS	INSULATING MATERIAL
Na	2
Mg	0.03
Al	4
Si	23
P	0.01
S	0.04
Cl	0.10
K	7
Ca	0.08
Ti	0.11
Cr	1.8
Mn	1.4
Fe	1.8
Co	0.7
Ni	0.8
Zn	Tr
Rb	Tr
Sr	Tr
Zr	Tr
Nb	-
Mo	-
Cu	-
As	-

Tr=0.001~0.01

23/24

FIG.23



24/24

FIG.24

BINDER	
FIRST POWDER	CEMENT
	SODIUM CARBONATE
	KAOLIN
	AMORPHOUS SILICA
	METHYL CELLULOSE
	CASEIN
	PERLITE
SECOND POWDER	MORTAR
THIRD POWDER	ALUMINUM OXIDE